former of whom, at least, was in the habit of receiving specimens from Labrador, and by some accident, the earlier localities may have been given erroneously. *Samuel H. Scudder.*

BIBLIOGRAPHICAL RECORD.

Authors and Societies are requested to forward their works to the Editor at the earliest date possible. We ask our readers to inform us of the publication especially of those works which are not generally consulted by entomologists. *B. Pickman Mann.*

(*Continued from page* 56.)

* 146. The **Report of the** [United States] **Commissioner of Agriculture** for the year 1872, contains the following, and Nos. 147, 148.

a. Value of the Division of Entomology of the Department of Agriculture (by Fred'k Watts), p. 4–5. *b.* Lessened ravages of the chinch-bug, the Hessian-fly and the Colorado potato-beetle (by J. R. Dodge), p. 11–12. *c.* Injury done to horses by bots and buffalo-gnats, p. 32, to cattle by the "heel-fly," p. 35, and to sheep by scab and "grub in the head," p. 37 (by J. R. Dodge). *d.* Connection of insects with the Black-knot of Plum and Cherry trees (by Prof. C. H. Peck), p. 175–176. *e.* Colleges which give instruction in entomology, pp. 358, 361, 368, 369, 374, 382. *f.* Notice of Adair's Progressive Bee Culture (1872) [Bees do not possess reasoning powers; nature and function of the "queen"], p. 401–402; of Adair's Annals of Bee Culture for 1872, p. 402. *g.* False remedy for the Hessian-fly exposed (by Prof. S. I. Smith), p. 448. *h.* An invasion of asparagus-beetles checked by hens; of orange-colored wheat-aphides checked by a red-bug (by J. S. Gould), p. 448. *i.* The large podded milk weed (in Utah) destructive to bees (by H. E. Norton), p. 451. *j.* Dr. Hull's new curculio-catcher described, p. 451. *k.* No insects prey on young osage-orange plants (by H. J. Dunlap), p. 474. *l.* Hibernation of honey-bees (by Mrs. E. S. Tupper), p. 479–480. *m.* Grape-roots injured by a Phylloxera (?) (by G. W. Campbell), p. 504.

* 147. Townend Glover. Report of the Entomologist and Curator of the Museum. p. 112–138, fig. 1–26.

a. Anarsia pruinella (fig. 1) killing the tips of peach-twigs; remedies. *b. Araeocerus coffeae* (fig. 3) destroying peaches. *c. Mycetobia persicae* (fig. 4) feeding on the exudations from the burrows of *Aegeria exitiosa* in peach-trees. *d.* Larvæ of *Sciara* sp. (fig. 5) forming snake-like masses; habits of other species of Sciara. *e. Romalea microptera* (fig. 6–7) injuring gardens and orchards; remedies. *f. Amphicerus bicaudatus* (fig. 8) injuring grape-vines, fruit-trees and *Carya alba*; remedies. *g.* Ravages of *Anomis xylina* and *Heliothis armigera* upon the cotton, and of *Prodenia autumnalis* upon corn, grass and peas. *h.* Present distribution of *Dory-*

phora decemlineata; its ravages lessened by natural enemies and artificial means; several field-crops injured by Cantharid beetles and other unidentified insects. *i.* Ravages of *Micropus leucopterus* upon sorghum and cereals; of *Cecidomyia destructor* upon wheat; of *Caloptenus spretus, C. femur-rubrum* and *Agrotis?* spp.? generally; of *Lachnosterna* spp. and *Leucania unipuncta* upon meadows and field-crops. *j.* Means against *Macrodactylus subspinosus.* *k.* Appearance and ravages of *Cicada septendecim.* *l.* Means against plum-tree insects. *m.* Injuries by *Bruchus pisi, Macrosila carolina, Aphis humuli?*, cabbage-worms, and canker-worms. *n.* Directions for sending specimens and notes. *o.* Notes on the Diptera, with their remedies. General habits of the order; habits of, and means against, the mosquito (fig. 9), *Cecidomyia destructor* (fig. 10), *C. tritici* (fig. 11), *C. grossulariae, C. robiniae* and other gall-gnats, *Tipula oleracea* (fig. 12), *Trichocera hyemalis* (fig. 14), *Simulium* spp., *Tabanus atratus* (fig. 15), *T. chrysops* (fig. 16), *Oestrus ovis* (fig. 17), *Oe. bovis* (fig. 18), *Gasterophilus equi*, house-flies, *Stomoxys calcitrans* (fig. 19), *Sarcophaga carnaria, Calliphora vomitoria* (fig. 20), *Lucilia caesar* (fig. 21), *Anthomyia ceparum* (fig. 22), *Psila rosae* (fig. 23), *Ortalis flexa* (fig. 24), *Chlorops* spp., *Agromyza tritici, Hippobosca equina* (fig. 25), *Melophagus ovinus* (fig. 26), fleas, *Sarcopsylla penetrans*; means against insects in general.

* 148. Lewis Bollman. Silk Cultivation, p. 304–316.

[Commercial subjects are excluded.] Proper atmospheric conditions, food, treatment and selection of caterpillars to favor success.

* 149. The **Report** [U. S.] **Comm. Agric.** for 1873, contains the following, and Nos. 150, 151.

a. Importance of entomology; arrangement of the collections of the Department of Agriculture (by Fred'k Watts), p. 9–10. *b.* Completeness of the Department library in standard works on entomology (by F. Watts), p. 11. *c.* Ravages of the chinch-bug and of grasshoppers (by J. R. Dodge), p. 16. *d.* Connection of insects with the Orange Blight (by Thomas Taylor), pp. 200, 201, 205. *e.* Means against insects on orange-plants (by T. Taylor), p. 206. *f.* The growing of Jute (*Corchorus capsularis*) a protection from insects in cotton-fields (by Emile Lefranc), pp. 269–270, 271. *g.* Red pepper efficacious against cabbage-lice (by J. W. Still), p. 289. *h.* Offer of a prize for information about *Phylloxera vastatrix* (by the French Society for the Encouragement of National Industry), p. 289. *i.* Colleges which give instruction in entomology, pp. 323, 331, 336, 348, 352. *j.* Advantage of drought to insects, p. 387–388. *k.* Injury done to raspberries by tree-crickets (by H. H. McAfee), p. 389. *l.* Habits and depredations of the grape Phylloxera (by C. V. Riley), p. 389–390. *m.* Depredations (in Iowa) of *Leucania unipuncta, Lygaeus leucopterus, Cecidomyia destructor, Lachnosterna quercina, Bostrichus bicaudatus*? and —— ? upon grass, wheat, grape-vines and fruit-trees, p. 391–392. *n.* Ransom process of exterminating curculios, p. 430. *o.* Prolificacy of Lepidoptera (by Prof. G. H. Perkins), p. 476. *p.* Donations to Museum, pp. 477, 478. Index

* 150. Townend Glover. Report of Entomologist and Curator of the Museum. p. 152–169, fig. 1–10.

a. Systena blanda (fig. 1), attacking leaves of *Zea mays*; habits; remedies. *b. Xyloryctes satyrus* (fig. 2) eating roots of Fraxinus and Liquidambar; description of larva; remedies. *c.* Habits of *Oncideres cingulatus* (by G. F. B. Leighton). *d.* Present distribution of *Doryphora decem-lineata*; means against it. *e.* Habits and luminosity of *Pyrophorus physoderus* (fig. 3), compared with *P. noctilucus* (fig. 4) and *Photinus pyralis*. *f.* Ravages of *Caloptenus* spp.? *g. Phytolacca decandra* a blatticide. *h.* Habits, transformations, parasites (*Microgaster congregata, et al.*) and enemies of, and means against, *Macrosila carolina* (fig. 5–7), compared with *M. quinquemaculata* (fig. 8); *Pteromalus tabacum* parasitic on the Microgaster. *i.* Injury done to grape-vines by *Aegeria polistiformis*. *j.* Remedies for the Phylloxera; are the root and leaf lice identical? *k.* A luminous Elaterid (?) larva (fig. 10). *l. Anomis xylina* distinguished from *Heliothis armigera* in all stages; ravages of the Anomis; detailed statements upon the efficacy of Paris green as a remedy, the mode of its application and its injurious or poisonous effects, and upon other remedies for the Anomis.

* 151. E. Ware Sylvester. The Osier Willow. p. 254–255.

Habits of, and means against, *Nematus ventralis* and other Tenthredinidae injurious to *Salix viminalis* and other willows.

* 152. **F. V. Hayden's** [Seventh] **Annual Report of the United States Geological and Geographical Survey of the Territories**, embracing Colorado, being a Report of Progress of the Exploration for the year 1873. Conducted under the Authority of the Secretary of the Interior. Washington, 1874, p. 537–606, with figures, contains the Report of Lieut. W. L. Carpenter on the Collections made by him in 1873, while connected with the United States Geological Survey, consisting of the following, and Nos. 153 to 160.

Introductory and explanatory letter (by W. L. Carpenter), p. 537–538.

* 153. W. L. Carpenter. Destruction of Pine-timber in the Rocky Mountains. p. 538–539.

Pinus ponderosa stripped of its bark by unknown causes.

* 154. W. L. Carpenter. Report on the Alpine Insect-fauna of Colorado. p. 539–542.

Similarity of the alpine insect-fauna of the Rocky Mts. to that of Mt. Washington, N. H., Labrador and Aliaska; list of 10 Hymenoptera, 9 Lepidoptera, 13 Diptera, 16 Coleoptera, 3 Hemiptera, 4 Orthoptera, 7 larvæ, 2 pupæ collected; general remarks; notes on a few species.

* 155. W. H. Edwards. List of [41] Species of But-

terflies collected by Lieut. W. L. Carpenter, U. S. A., for the United States Geological Survey of Colorado, 1873. p. 542.

* 156. A. S. Packard, Jr. On the Geographical Distribution of the Moths of Colorado. p. 543–560, fig. 1–15.

Nature of the Coloradian alpine and subalpine faunæ; their relations to the similar faunæ of arctic and other north-temperate regions; origin of these faunæ; laws of climatic variation. Enumerates, with notes, one Tortricid (larva), 4 (*Crambus Carpenterellus* = 1 new) Pyralidae, 39 (*Marmopteryx tessellata* from Arizona = 1 new) Phalaenidae, 9 Noctuidae, 16 (*Hemileuca Diana* = 1 new) Bombycidae, 2 Zygaenidae, 3 Sphingidae, and immature 3 Diptera, 3 Coleoptera, 1 Hymenopter.

* 157. C. R. Osten Sacken. Report on the Diptera collected by Lieut. W. L. Carpenter in Colorado during the Summer of 1873. p. 561–566, fig.

Indication of the needs of American dipterology and of the proper mode of collecting Diptera; characters of the faunæ to which the specimens belong. Enumerates over 50 species, but 17 of which are determined; monograph of *Bibiocephala grandis*, a new species and genus of Blepharoceridae.

* 158. C. R. Osten Sacken. Notice on the Galls collected by Lieut. W. L. Carpenter. p. 567.

Three oak-galls (Cynips), two? willow-galls (Nematus), two? cottonwood galls (Pemphigus?), one sage-bush gall (Trypeta?).

* 159. Henry Ulke. List of Species of Coleoptera, collected by Lieut. W. L. Carpenter, United States Army, for the United States Geological Survey of Colorado, 1873. p. 567–571.

164 species of 103 genera of 30 families enumerated; notes (by W. L. C.) on the habitat and food-plants of *Lytta Nuttalli*, *Tachyta lituratа*, *Doryphora decem-lineata*, *Erotylus Boisduvalii*. Adaptability of the color of species to their food-plant.

* 160. H. A. Hagen. Report on the Pseudo-Neuroptera and Neuroptera collected by Lieut. W. L. Carpenter in 1873 in Colorado. p. 571–606.

Describes 2 Termitina, 8 (7 new) Perlina, 7 (3 new) Ephemerina, 15 (4 new) Odonata, 2 new Phryganina; enumerates, with localities, 54 (23 Coloradian) Pseudo-Neuroptera; 17 (13 Coloradian) Neuroptera; characters and relations of the faunæ to which the species belong.

* 161. **The Rural Carolinian,** vol. v, from p. 169, contains the following, and Nos. 162 to 172.

a. "Fly" in Wheat [habits of *Cecidomyia tritici*] (by C. R. Dodge), p. 195. *b.* What a Fairy saw in a Bee-hive [honey-gathering and bee-

enemies], p. 219. *c.* The Eucalyptus and the Phyloxera [see Rec., No. 134, *d*], p. 223. *d.* Directions for obtaining information about troublesome insects, pp. 243, 312, 537-538, 602, 656. *e.* How Mr. Steen killed the [Cotton] Caterpillars, p. 294. *f.* Carbolic Acid for insects (by I. I. Hite), p. 304. *g.* To free poultry from Lice, p. 379. *h.* Carbolic Soap for Lice on Cattle, p. 404–405. *i.* Bed Bug Preventive (by J. R. B.), p. 444. *j.* Moth Preventive, p. 444. *k.* Plum-twigs surrounded by Insects [habits of and means against aphides] (by C. R. Dodge), p. 477–478. *l.* Simple Remedy for Bee-stings, p. 498. *m.* Making Ants Mad [see Rec., No. 142, *q*], p. 503. *n.* For destroying Lice on Cattle, p. 525. *o.* The Curculio circumvented at last—perhaps [by the odor of burning tar and sulphur], p. 529. *p.* Cabbages and their enemies p. 529–530. *q.* Co-relation of Bees and Flowers, p. 535. *r.* For protection against Moths (by M. L. B.), p. 558. *s.* White Grub Fungus [fatal to larvæ of *Lachnosterna* sp.] (by C. R. Dodge), p. 584. *t.* Means against squash-bugs (*Coreus tristis*), p. 604. *u.* Alum for Insects, p. 669. *v.* For preventing damage by Moths, p. 669–670.

* 162. Charles R. Dodge. The Paris Green Remedy for the Cotton Caterpillar. p. 193–195.

Results of experiments; mode of application; dangers in its use.

* 163. C. R. Dodge. The Swallow-tail Butterflies. p. 247–248.

Description and habits of larvæ and imagos of some common N. A. species of Papilio.

* 164. C. R. Dodge. A few Remedies for Insects. p. 312–313.

To destroy [scale] insects on fruit trees; the rose aphis; destroying cockchafers; to destroy ants; caterpillars on cabbages; poisoning cockroaches.

* 165. C. R. Dodge. The "Lubber" Grasshopper. p. 363.

Habits of and means against *Romalea microptera.*

* 166. Carbolic Acid for Insects. p. 364.

Means and effects of its application.

* 167. C. R. Dodge. Injury to Cotton by Insects. p. 417–418.

Seasons and ravages of *Anomis xylina, et al.*

* 168. C. R. Dodge. A pair of Pine-Weevils. p. 476–477.

Habits of and means against *Hylobius pales* and *Pissodes strobi*, injurious to young cedars.

* 169. J. Parish Stelle. The Cotton Caterpillar and how to Combat it Successfully. p. 511–516, fig. 1–2.

Description, figures and habits of all stages of *Anomis xylina*; means against it.

* 170. C. R. Dodge. Science vs. Ignorance. p. 536–537.

Usefulness of *Coccinella novemnotata* in ridding peach-trees of aphides; other means against the aphides.

* 171. C. R. Dodge. Notes. p. 537–538.

How to send insects in alcohol; how to get and use Paris Green.

* 172. W. P. Reese, M.D. The Cotton Caterpillar Again. p. 565–566.

Habits of and means against *Anomis xylina*.

Proceedings of the Club.

(The paragraphs under this heading, though in most cases drawn up by the Secretary, have been revised by their respective authors, who are responsible for them.)

§ 1. Proper Wood for Insect-boxes.—A discussion of the merits of different woods for use in the construction of insect boxes showed a preference among the members of the Club for the woods of the Aspen (*Populus tremuloides*), Tulip (*Liriodendron tulipifera*) and Bass-wood (*Tilia americana*). Baron Osten Sacken says that the resin contained in pine wood (*Pinus strobus*) exhales as a vapor, which eventually combines with the fat of the specimens enclosed in the box and renders them greasy. It was suggested that a number of persons who wished to have boxes made of these woods should combine together to purchase some trees for the purpose, as these woods are not generally offered for sale in the market.

B. Pickman Mann.

§ 2. Ocytes Seminole in Massachusetts. Mr. S. H. Scudder exhibited a single female of *Ocytes Seminole* taken by Mr. R. Thaxter in the marshes near Belmont, Mass. It has not before been recorded north of Florida, and in its markings stands midway between specimens from Florida and Texas, exhibited with it. Other species of the genus were also shown for comparison.

Dr. Hagen said that Florida Pseudo-Neuroptera are found on Cape Cod.

Mr. Scudder remarked that southern butterflies not infrequently occur in a narrow belt of country near the sea shore, as far north as New Hampshire.

§ 3. Prothoracic Glands in Lepidopterous Larvæ. Mr. S. H. Scudder exhibited an inflated caterpillar of *Argynnis Cybele*, in which the prominence often seen on the under surface of the first thoracic segment of butterfly caterpillars was unusually large, and presented a transverse slit. It is probable that this organ secretes fluid for softening the leaf before eating, and Mr. Scudder queried whether the glands which supplied the fluid might not bear some relation to those which feed the osmateria of the Equites. Mr. Guenée had described an extensile protuberance with a transverse slit on the dorsum of the seventh abdominal segment in the larva of a European Lycaena, which when subjected to pressure emits a fluid.

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